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Trustworthiness: A Critical Ingredient for Entrepreneurs Seeking Investors

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We investigate how an entrepreneur's behaviors during an initial interaction with a business angel can build, damage, or violate trust, and how the investor's level of trust (prompted by the entrepreneur's behavior) can affect his/her decision to make an investment offer. Our empirical analysis shows that entrepreneurs who receive offers from business angels exhibit a larger number of trust-building behaviors during the initial interaction and a smaller number of unintentional trust-damaging behaviors than those who do not receive an offer, and display few deliberate trust-violating behaviors. We further observe that the investor's deployment of a control mechanism is a prerequisite for receiving an investment offer for all entrepreneurs who damage or violate trust.

Introduction

Most business ventures with high growth potential require significant amounts of external funding for working capital, fixed asset acquisition, and technology development (van Osnabrugge, 2000). This cash is often obtained through risk capital investments from business angel investors (BAs)—private individuals who invest their own money, on a risk/reward sharing basis, in companies in which they have no direct connection (Kelly & Hay, 2003). Unfortunately, entrepreneurs' success rate in receiving BA funding is less than 5% of all applications submitted, for instance, in Canada (Riding, Duxbury, & Haines, 1997). Mason and Harrison (2003) characterize the interaction between BAs and entrepreneurs as a multistage decision-making process, where initial evaluations lead to the rejection of most business opportunities.

This paper examines why BAs reject business opportunities that have passed earlier stages of the investment decision-making process. Mason and Harrison (2003) further observe that the criteria BAs use to accept or reject an opportunity change as the decision-making process evolves, as later in the process the BA focuses on assessing the risk in his/her anticipated relationship with the entrepreneur. That risk rises if the BA perceives that the entrepreneur might spend the BA's money differently than would the BA (van Osnabrugge, 2000), which creates uncertainty on the BA's part about the wisdom of the

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entrepreneur's future decisions and behaviors. *How, then, does a BA interpret an entrepreneur's behaviors during an initial interaction to decide whether or not to make an investment offer?*

Research on BA decision making has been limited and frequently constrained by reliance on data collected at the end of the decision-making process rather than *during* that process (Wiltbank, Read, Dew, & Sarasvathy, 2009). Furthermore, much research has relied on investors' recollections of the decision-making process, despite findings that they are often unaware of their own decision-making process (e.g., Zacharakis & Meyer, 1998). Although laboratory-based experiments where external observers record actual decision-making behaviors can explore some of these issues, experiments also suffer from generalizability concerns because they cannot create the actual, essential components of the anticipated relationship between a BA and entrepreneur. Such components include the emotional ownership of the idea (Cardon, Zietsma, Saporito, Matherne, & Davis, 2005), actual risk due to the substantive amount of money at stake in the decision-making process (Rabin, 2000), and the potential for long-term relationship development (Kelly & Hay, 2003), which are key in the BA–entrepreneur relationships.

We therefore adopt a research method referred to as observational interaction (Bakeman & Gottman, 1997) to record, code, and analyze behaviors during actual BA–entrepreneur interactions. We were inspired by the work of Kelly and Hay (2003) who posit that to achieve confidence in the entrepreneur's anticipated behaviors, the BA must develop a relational contract characterized by an informal relationship with the entrepreneur where trust developed in that relationship can ostensibly replace formal contract clauses. A trust-based relationship is one where “the willingness of a party to be vulnerable to the actions of another party [is] based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party” (Mayer, Davis, & Schoorman, 1995, p. 712). We observe how the entrepreneur's trust-based behaviors affect the BA's assessment of the risk in his/her anticipated relationship with the entrepreneur, and hence affect the decision whether to make an investment offer. We develop a behavioral schema (explained in section 3) for coding each display of the entrepreneur's trust-building, trust-damaging, and trust-violating behaviors and compare such displays with the interaction outcomes (i.e., to make an offer or not).

We contribute to the entrepreneurship literature in three major ways. First, viewing the hard-to-define concept of trust as a “decision variable” provides unique insights into how cooperative, trusting relationships are formed (i.e., the BA in this study assesses whether his/her trust level is high enough to continue the relationship with the entrepreneur). Second, a focus on the effect of entrepreneurial behaviors reinforces Gartner's (1988) suggestion that research should concentrate on “what the entrepreneur *does*, and not who the entrepreneur *is*” (p. 57, italics added). Third, the use of an innovative research method for studying interpersonal relationships, and the resulting development of a coding system that dynamically measures multiple facets of trust-based behaviors, provide useful tools for studying the influence of an entrepreneur's trustworthy behaviors as cues that inform investment decisions.

In the next section, we draw from research on BA investment decisions and investment risk to explore how the development of relational contracts, based on displays of trust-based behaviors or cues, can be key factors in whether a BA decides to continue building the relationship. We then use existing research on trust to develop four categories of trust dimensions that characterize how certain behaviors can build, damage, or violate trust. From this, we offer four hypotheses on how trust-based behaviors can influence the

investment decision, including one that entails the BA's introduction of a control mechanism. We then present our research method and results, and conclude with theoretical, methodological, and practical implications.

Staged Investment, Relationship Risk, and Trust

Maxwell, Jeffrey, and Lévesque (2011) summarize a body of research that identifies the multistage nature of the BA's decision-making process, and the stages at which the BA considers key decision factors. They find that during this multistage process, the BA often initially rejects a business opportunity due to a single "fatal flaw" (as perceived by the BA) during the initial interaction with the entrepreneur. Subsequently, the BA's assessment of the proposed venture allows him/her to predict anticipated investment return and investment risk based on specific factors—market, technology, and financial—as well as entrepreneurial skills and characteristics. This prediction thus enables the BA to reject opportunities that do not meet his/her predetermined investment aspiration level or exceed a maximum level of investment risk (i.e., the likelihood of a complete loss).

In the case of BA investing, Fiet (1995) identifies two components in investment risk: market risk and agency (or relationship) risk. Das and Teng (1998) expand on this by extending market risk to performance risk, which also includes technological and implementation risk. Performance risk reflects the likelihood that the venture's objectives will not be achieved due to operational or external problems (such as unexpected competitor activities). Relationship risk is primarily the risk that the entrepreneur, while managing the venture, may not make the same decisions when spending the BA's money as would the BA himself/herself. In the context of this dyadic relationship, we focus on concerns the BA might have about the entrepreneur's future decisions and behaviors, although we note that relationship risk is reciprocal and the BA may not always act in the entrepreneur's best interests (Arthurs & Busenitz, 2003).

Relationship risk is thus due to moral hazard, where the entrepreneur makes decisions that create a divergence of interests between the parties (e.g., using the company's money to pay for personal expenses). Relationship risk is also due to adverse selection, where the BA and entrepreneur have different perceptions and familiarity with information, resulting in suboptimal decision making. That is, perceptual asymmetry (Yazdipour, 2010) between the BA and entrepreneur results in the entrepreneur making poorer decisions than might have been made by the BA due to perceived differences in risks and opportunities or a lack of competence (van Osnabrugge, 2000). Because the BA does not need to assess relationship risk in the investment decision-making process until anticipated return and performance risk have been determined, he/she assesses relationship risk later on in the process. Also, since relationship risk comes from the BA's uncertainty about the entrepreneur's future decisions and behaviors while running the business, its assessment requires significant cognitive effort as well as information about the entrepreneur's previous performance (Ouellette & Wood, 1998). However, such information emerges later in the BA–entrepreneur interaction (Boon & Holmes, 1991).

To reduce relationship risk, the BA strives to increase his/her confidence in the future behavior of the entrepreneur via tools such as behavioral and output controls. Behavioral controls specify and monitor acceptable boundaries of conduct and behavior that comply with stated rules (e.g., BA signature is required on all checks) rather than the venture's performance (Eisenhardt, 1985). Behavioral controls thus reduce the likelihood of adverse selection. Output controls, on the other hand, are designed to reduce the risk of moral hazard through the alignment of the BA's and entrepreneur's goals and incentives. They

thus specify how the BA will measure the entrepreneur's and venture's performance, and how to penalize the entrepreneur if agreed-upon performance milestones (e.g., revenue targets) are not achieved (Whitener, Brodt, Korsgaard, & Werner, 1998). Both types of controls incur transaction costs, which can reduce anticipated returns or limit the speed at which the venture can react to opportunities (Dyer & Chu, 2003). The use of such controls, common in venture capital investing, is less common among BAs, partly because venture capitalists (VCs) need to explain their investment decisions to funders and controls are easier to explain to a third party; in contrast, BAs do not need such explanations since they invest their own money (van Osnabrugge, 2000). In addition, VCs often view the replacement of the entrepreneur as a viable option and must insert language to this effect in the control clauses, an option that BAs rarely consider (Bruton, Fried, & Hisrich, 2000). As a result, a more suitable (and often less costly) approach to reduce relationship risk is for the BA to develop interpersonal trust with the entrepreneur.

Research on the dyadic development of trust in close personal relationships (Boon & Holmes, 1991) and actions/reactions in game-theoretic reasoning (Boyle & Bonacich, 1970) enables us to articulate how trust-based behaviors affect the relationship to the point where the decision to make an investment offer, or not, can be made. The BA's initial level of trust is based on his/her innate trust temperament (Strickland, 1958) or predisposition to trust (Colquitt, Scott, & LePine, 2007; Lewicki, Tomlinson, & Gillespie, 2006), which is related to his/her own trustworthiness under the assumption that others will behave similarly to oneself (Serva, Fuller, & Mayer, 2005). The BA's initial trust assessment is further shaped by referral sources (Paul, Whittam, & Wyper, 2007), the entrepreneur's reputation and institutional affiliations, and the context of the proposed transaction (McKnight, Cummings, & Chervany, 1998). The entrepreneur's physical appearance (Grégoire, de Koning & Oviatt, 2008) and the nature of the anticipated relationship (Butler, 1991) also influence initial levels of trust.

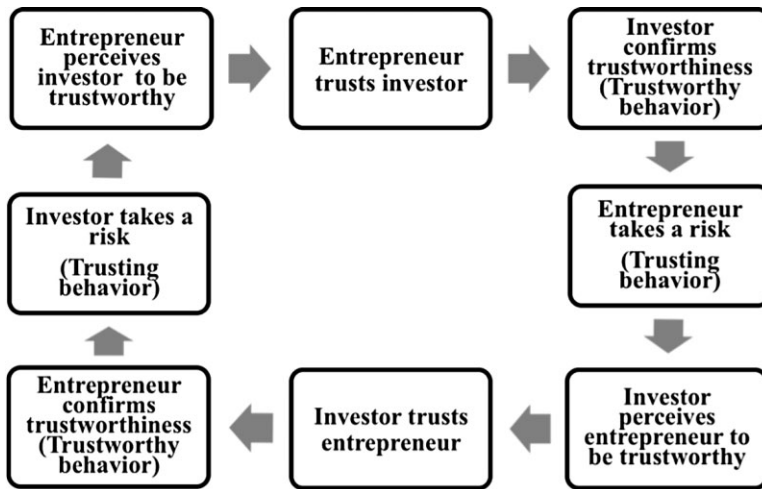
Unlike traditional models of trust development that focus on intent (i.e., Mayer et al., 1995), we rely on evidence from behavioral experiments that demonstrate how trust in a relationship develops, based on a sequence of behaviors/actions and responses/reactions. The framework of Serva et al. (2005) inspired the development of Figure 1, which illustrates a cycle of behaviors where each party builds trust in the relationship by first trusting the other party, and then waiting for the decision to be confirmed by the other's display of trustworthiness (Lewicki & Bunker, 1996).¹ In this circular phenomenon, the BA first trusts the entrepreneur. Subsequently, trust in the relationship builds if the entrepreneur displays trustworthy behaviors that confirm the BA's expectations. The entrepreneur then trusts the BA, who responds by showing that he/she too is trustworthy (Rempel, Holmes, & Zanna, 1985). This reciprocal sequence continues with modifications to trust levels in the relationship (Shapiro, Sheppard, & Cheraskin, 1992) based on the BA "auditing" limited samples of the entrepreneur's behavior for examples of positive and negative trust displays (Kramer, 1996).

While trust develops in the BA–entrepreneur relationship due to displays of behaviors that engender trust, negative trust-based behaviors reduce the trust level in the relationship. Specifically, if the trustee's behavior *confirms untrustworthiness*, then trust is violated while distrust develops (Lewicki et al., 2006). However, if the trustee's behavior *fails to confirm trustworthiness*, then trust is damaged and mistrust develops. Marsh and Dibben

1. Trust develops when trustworthiness is confirmed. For instance, it is the demonstration that an entrepreneur has the expected relevant ability to complete a specific task that builds trust in the relationship, not having the ability per se.

Figure 1

Reciprocal Trusting and Trustworthy Behaviors



(2005) suggest that the fundamental difference between the two is that the former is deliberate whereas the latter is unintentional, and they are both a function of the reasons the trustor attributes to the trustee's negative behavior (Tomlinson & Mayer, 2009). Deutsch (1973) identifies an alternative negative outcome that also damages trust, namely suspicion, which occurs if the trustee's behavior *fails to confirm untrustworthiness*. The type of negative behavior that causes distrust, mistrust, or suspicion impacts the likelihood that the relationship will continue (Whitener et al., 1998). Trust violations often cause immediate termination of a relationship (McKnight et al., 1998), and how trust is damaged influences whether it can be "repaired" (Kim, Dirks, & Cooper, 2009). We focus attention on how entrepreneurs' negative trust displays impact the interaction outcomes between BAs and entrepreneurs (i.e., whether the BA decides to make an investment offer or not).

Although several researchers have identified the role of trust in the investment decision (e.g., Harrison, Dibben, & Mason, 1997; Shepherd & Zacharakis, 2001), they have faced a number of challenges in gathering data to test their theories. Attempts to operationalize trust have met with limited success (Currall & Judge, 1995) partly because, as Kramer (1999) notes, some scholars view trust as a psychological state and that individuals' dispositions affect intentions (e.g., Mayer et al., 1995) while others view trust from a behavioral perspective (e.g., Whitener et al., 1998). We adopt the behavioral perspective view because behaviors are better predictors of future behaviors than are intentions (Ouellette & Wood, 1998), and because behaviors are easier to observe and code than psychological states.

Behavioral Trust Schema and Hypotheses Development

The level of trust in the dyadic relationship between investor and entrepreneur changes over time as different trust-based behaviors are displayed and the interaction evolves (Rempel et al., 1985). As the BA interprets the entrepreneur's trust-based

behaviors, the BA gains confidence in the predictability of the entrepreneur's future behaviors. The BA then uses these insights to assess the relationship risk that emerges due to adverse selection or moral hazard, and to determine if that risk can be sufficiently reduced to prompt the BA to make an investment offer. We chose to develop our own behavioral trust schema to observe, code, and analyze positive and negative trust-based behaviors displayed during an investment interaction since no known schema exists. Empirical research on trust has been hampered because researchers have used numerous definitions of trust, and have applied them inconsistently (Lewicki et al., 2006). In developing our behavioral trust schema, we draw extensively on Gillespie's (2003) Behavioral Trust Inventory and Butler's (1991) Conditions of Trust Inventory. We start with the definition of four general categories of trust dimensions—trustworthy, capable, trusting, and communicative—and provide examples of behaviors for each.

Mayer et al.'s (1995) classic definition of trustworthiness includes integrity, benevolence, and ability. Integrity is defined as "the extent to which the party's actions are congruent with his or her words" and "the trustee[s] adher[ence] to a set of principles that the trustor finds acceptable" (p. 719). Simons (2002) emphasizes that behaviors associated with each are different. Hence, to avoid confusion, we use "consistency" (Whitener et al., 1998) and "alignment" (Lewicki et al., 2006), respectively. These two components of integrity, rather than integrity itself, are easier to code, and along with benevolence, they form our three behavioral trust dimensions for the *trustworthy* category. Each dimension is exemplified in Table 1.

The concept of ability in Meyer's (1995) classic definition of trustworthiness is based on a group of skills, competencies, and characteristics that are all context dependent (e.g., a software engineer might show that he/she is competent to program a computer, but not to build one). In contrast, trustworthy behaviors can be displayed across a variety of contexts (an individual who is benevolent in his/her social life is likely to be benevolent at work). Hence, we create a separate category called *capable*, which we divide into three dimensions—competence, experience, and judgment—in order to again reduce definitional and coding confusion.

Trustors see displays of *trusting* behaviors, also exemplified in Table 1, as an indication that the individual is trustworthy (Serva et al., 2005). Trusting behaviors involve the trustee taking a risk by demonstrating vulnerability to the actions of others (Mayer et al., 1995). Trusting behaviors include: self-disclosing information that, if used inappropriately, could cause the entrepreneur harm (Gillespie, 2003); reliance on delegation (Clark & Payne, 1997); and receptiveness through a willingness to accept others' influence (e.g., by being "coachable"; Levie & Gimmon, 2008).

As for the last category of trust dimensions, *communicative*, we rely on Whitener et al. (1998) who highlight how reliable communications affect the speed and quality of relationship development. Behaviors that demonstrate reliable communication confirm the accuracy of information exchanges between the trustor and trustee (Rotter, 1980), willingness to explain information content (Sapienza & Korsgaard, 1996), and reveal a sense of openness, especially with respect to receiving feedback (Clark & Payne, 1997). An entrepreneur rapidly informing the BA on both positive *and* negative outcomes of a meeting with stakeholders is a good example of communication that builds trust. The four categories and 12 behavioral trust dimensions (three per category) discussed are summarized in Table 1, which also offers relevant scholarly references to support our use of each dimension, and additional examples of specific behaviors that can build, damage, or violate trust.

In line with these behavioral displays, which are trust building, trust damaging, or trust violating, we develop a series of hypotheses as to their impacts on the BA's

Table 1

Behavioral Trust Schema and Manifestations

		Manifestations			
Behavioral trust dimensions		Build trust	Damage trust	Violate trust	Reference
Trustworthy	Consistency	Displays of behavior that confirm previous promises	Shows inconsistencies between words and actions	Fails to keep promises and agreements	Butler, 1991; Gabarro, 1978; Lewicki & Bunker, 1996
	Benevolence	Exhibits concern about well-being of others	Shows self-interest ahead of others' well-being	Takes advantage of others when they are vulnerable	Mayer et al., 1995; McAllister, 1995; Rempel et al., 1985
Capable	Alignment	Actions confirm shared values and/or objectives	Exhibits behaviors sometimes inconsistent with declared values	Demonstrates lack of shared values and willingness to compromise	Arburs & Busenitz, 2003; Butler, 1991; Lewicki et al., 2006
	Competence	Displays relevant technical and/or business ability	Shows lack of context-specific ability	Misrepresents ability by claiming to have non-existent competence	Butler, 1991; Gabarro, 1978
Trusting	Experience	Demonstrates relevant work and/or training experience	Relies on inappropriate experience to make decision	Misrepresents experience	Amit, Glosten, & Muller, 1990
	Judgment	Confirms ability to make accurate and objective decisions	Relies inappropriately on third parties	Judges others without giving them the opportunity to explain	Kramer, 1996; Rosen & Jerdee, 1977
Communicative	Disclosure	Shows vulnerability by sharing confidential information	Shares confidential information without thinking of consequences	Shares confidential information likely to cause damage	Clark & Payne, 1997; Curral & Judge, 1995; McAllister, 1995; Rempel et al., 1985
	Reliance	Shows willingness to be vulnerable through delegation of tasks	Reluctant to delegate, or introduces controls on subordinates' performances	Is unwilling to rely on representation by others, or dismisses participation	Clark & Payne, 1997; Gabarro, 1978; Gillespie, 2003
Openness	Receptiveness	Demonstrates "coachability" and willingness to change	Postpones implementation of new ideas or makes excuses for failures	Refutes feedback or blames others	Butler, 1991; Levie & Gimmon, 2008
	Accuracy	Provides truthful and timely information	Unintentionally misrepresents or delays information transmission	Deliberately misrepresents or conceals critical information	Rotter, 1980; Whitener et al., 1998
Explanation	Explanation	Explains details and consequence of information provided	Ignores request for explanations	Dismisses request for explanations	Sapienza & Korsgaard, 1996; Whitener et al., 1998
	Openness	Open to new ideas or new ways of doing things	Does not listen or refutes feedback	Shuts down or undermines new ideas	Butler, 1991; Gabarro, 1978; Sapienza & Korsgaard, 1996

willingness to make an investment offer. Initial evidence of the entrepreneur's trustworthiness is his/her display of trusting behaviors, which are followed by reciprocal displays of trusting and trustworthy behaviors that reinforce the trustor's original decision to trust (Rempel et al., 1985). As per our behavioral trust schema shown in Table 1, trusting behaviors involve self-disclosure, reliance, and/or receptiveness, whereas trustworthy behaviors involve consistency, benevolence, and/or alignment (e.g., of goals). BAs will also look for behaviors that confirm that the entrepreneur is capable (displays competence, experience, and good judgment) and communicative (displays accuracy, explanation, and openness when communicating). Hence, we expect that the entrepreneur's displays of trust-building behaviors (as exemplified in Table 1) increase the BA's confidence in how the entrepreneur will behave in the future, which reduces the relationship risk and as such increases the BA's interest in making an offer to invest. Therefore:

Hypothesis 1: An entrepreneur who receives a BA's investment offer has displayed a greater number of trust-building behaviors than an entrepreneur who does not receive such an offer.

While behaviors that confirm the BA's expectations function to build trust, behaviors that reduce the predictability of the entrepreneur's future behaviors damage trust (Rotter, 1980). We note that trust-damaging behaviors are not necessarily the absence of trust-building behaviors (Marsh & Dibben, 2005). As articulated in the previous section, a trustee's failure to confirm trustworthiness damages trust and mistrust develops, as does failure to confirm untrustworthiness, which creates suspicion. Behaviors that damage trust, or the absence of behaviors that build trust, increase the relationship risk and reduce the willingness of the BA to make an offer. Therefore:

Hypothesis 2: An entrepreneur who receives a BA's investment offer has displayed a smaller number of trust-damaging behaviors than an entrepreneur who does not receive such an offer.

We also argue that the motivation that the trustor attributes to the trustee's behavior creates the fundamental difference between behaviors that damage and those that violate trust. While trust damage can be inadvertent and unintended, trust violations are *intended to deceive*. Trust-violating behaviors create distrust in the relationship by confirming that the trustee is untrustworthy. For instance, an entrepreneur damages trust, if because of inexperience, he/she "over-trusts" and relies on an inappropriate partner (e.g., the entrepreneur allows an accountant to decide on potential distribution partners; Goel & Karri, 2006). However, if the BA discovers that the entrepreneur deliberately chose a friend as a partner for reasons other than a good skill set and experience, then the BA's trust in the entrepreneur is violated. Distrust created by a trust-violating behavior often generates anger in the trustor (Lewicki & Bunker, 1996). It can also trigger a reappraisal of the relationship and be so catastrophic that it prompts the termination of that relationship (Burt & Knez, 1996). Opportunities where the entrepreneur has displayed even a single trust violation (as those exemplified in Table 1) are thus expected to be less likely to receive an offer. Therefore:

Hypothesis 3: The percentage of entrepreneurs who receive a BA's investment offer after displaying trust-violating behaviors will be smaller than the percentage of entrepreneurs who did not display trust-violating behavior and receive such an offer.

For opportunities where trust in the relationship has been reduced due to trust-damaging or trust-violating behaviors, Currall and Judge (1995) suggest that relationship risk can be reduced to an acceptable level only through the investor's introduction

of controls. These include direct controls that allow the BA to participate in the venture's management and indirect controls that specify output or behavioral controls, where behavioral controls define boundaries of conduct and behaviors that comply with stated rules, and output controls articulate measures for the entrepreneur's and venture's performance. A BA's direct participation in the venture's management can control the entrepreneur's behavior by requiring the BA's permission before the entrepreneur can make certain decisions (e.g., the BA's approval of all strategic partnerships; Kelly & Hay, 2003). Indirect controls can be introduced through contract clauses in the shareholder agreement (Kaplan & Strömberg, 2004). The ability to introduce controls in a relationship depends on its progress (Lewicki & Bunker, 1996), the nature and dimension of the trust-damaging or trust-violating behavior (Kim et al., 2009; Tomlinson & Mayer, 2009), and the willingness of the trust damager or violator (in our case the entrepreneur) to accept the proposed control (Korsgaard, Brodt, & Whitener, 2002). A BA interested in a specific opportunity is more likely to propose a control once the relationship has developed and if the behavioral trust dimension that is damaged or violated can actually be addressed via the control (e.g., unattainable for reasons such as goal alignment or benevolence). To propose a control, the BA will likely attribute the damage or violation to incompetence rather than a negative intent, and be confident that the entrepreneur will accept it. As a result, the introduction of a control in instances of trust damage or violation is expected to increase the likelihood that a BA will make an offer. Therefore:

Hypothesis 4: For the group of entrepreneurs whose behaviors has damaged or violated trust, the percentage who receives a BA's investment offer will be greater for those to whom the BA presented a control than for those to whom he/she did not.

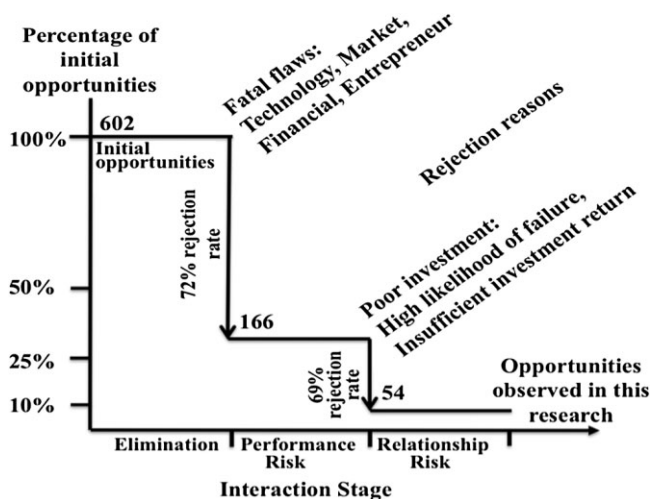
Research Methodology

We use a real-time technique to collect behavioral data from actual interactions to test these four hypotheses. Researchers have extensively used our chosen technique, observational interaction (Bakeman & Gottman, 1997), in observing the development and status of romantic relationships. While similar to surveys or conjoint studies on the questions addressed (e.g., to make an investment offer), observational interaction has multiple added benefits. It allows independent observers to extract certain data, and thus, remove the likelihood of self-reporting bias by individuals who may not be aware of the decision-making process they use (Petty & Gruber, 2011). This real-time data-gathering technique uses behaviors as the key unit of analysis, removing the judgment components inherent in assessing intentions and predispositions. It also allows the researcher to gather data over time and not need to know the outcomes of interactions (offer/no offer), which eliminates hindsight bias. Our use of this technique enables us to explore the stages of the investment decision under actual risk (i.e., actual money to be invested) and in the context of long-term relationship development.

The interactions that we use to code and analyze are extracted from a population of entrepreneurs interacting with BAs via guest participation in the Canadian Broadcasting Centre's (CBC's) reality TV show, *Dragons' Den* (<http://www.cbc.ca/dragonsden/>). In this globally syndicated (20 countries) show, actual or "hopeful" entrepreneurs, selected through an open audition process, pitch their business opportunities to a team of five experienced BAs, the "Dragons," in hopes of persuading them to invest between \$10,000

Figure 2

Elimination of Business Opportunities



and \$500,000 of their own money in return for equity in the business.² The BAs have no knowledge of the opportunity or the entrepreneur prior to their meeting in the “Den,” where the entrepreneur must request (and be offered) a specific investment amount (after describing his/her business opportunity) or go home with nothing. During the show, the investor must make a risky investment decision in 15 to 75 minutes. The interaction concludes when either all the Dragons provide a specific reason for being “out” or one or more of them decide to make an investment offer. If an offer is made and accepted, then there is a subsequent due diligence process, which if successful leads to an investment and the start of a long-term relationship between the BA and the entrepreneur.

For the four seasons (2004 to 2007) of the Canadian show we study, 602 entrepreneurs pitched to the BAs (although only about 60% of these recorded pitches aired, we reviewed all of the unaired versions as well). These 602 entrepreneurial pitches (opportunities) are investigated in Maxwell et al. (2011), who find that the BAs eliminated most (436) opportunities quickly due to the presence of a “fatal flaw” in the entrepreneur’s pitch. A further 112 opportunities were then rejected by the BAs due to concerns about performance risk, including “high likelihood of failure” and “insufficient investment return.” We focus on the remaining 54 pitches that made it through this attrition process, because they are the entrepreneurs whose trust-based behaviors influenced the BAs’ assessment of relationship risk (and the investment offer decision). Figure 2, inspired by Petty and Gruber (2011), summarizes the number of opportunities that the BAs considered at each of three identified stages of the interaction, the attrition process and the reasons that the BAs gave for rejection at each stage.

We employed two trained observers to independently code each interaction using the behavioral trust schema (see Table 1). Based on a video recording of the TV interactions,

2. CBC producers worked with industry experts, including one of the authors, to design and promote the selection (audition) process to replicate real-life situations. Each year, open auditions were held at 12 locations across Canada. In addition, entrepreneurs could apply online or by mail.

the observers coded the frequency of each individual entrepreneur's behavior that built, damaged, or violated trust, without knowing our underlying theory or the interaction's outcome (i.e., making an offer, or not). The observers also recorded whether or not (1/0) the BA introduced a control (i.e., BA's request for direct participation in managing the venture, request for output controls or behavioral controls), whether or not (1/0) the BA made an investment offer, and whether or not (1/0) the entrepreneur accepted it.

To rule out potential alternate explanations that could account for the observed outcomes, the observers also coded for whether or not (1/0) similarities (e.g., cultural background) existed between an entrepreneur and any one BA, and for the entrepreneur's presentation skill (1–5 Likert scale, 5 being the highest). Franke, Gruber, Harhoff, and Henkel (2006) suggest that investor–entrepreneur similarities can increase the likelihood of receiving an investment offer, while Baron and Markman (2003) and Clark (2008) note that high levels of presentation skill also increase this likelihood. The observers coded each interaction for the presence of a similarity between the entrepreneur and an interested BA if it seemed to be important to the BA. While several of the similarities were anticipated—sex, cultural background, and business experience—a number of personal similarities (e.g., hobbies, social networks) also emerged. Presentation skill was based on the observer's evaluation of the entrepreneur's perceptive ability and persuasiveness.

Results

Of the 54 interactions we analyzed, 32 led to an investment offer, of which 26 were accepted, as summarized in Table 2.³ In these 54 interactions, 571 trust-building behaviors were identified, along with 45 trust-damaging behaviors and 12 trust-violating behaviors. We note that a single instance of trust violation was enough to stop the interaction, while the display of more than one trust-damaging behavior did not preclude an investment offer. Figure 3 also offers the frequencies of trust-damaging and trust-violating behaviors per behavioral trust dimension, highlighting the importance of *competence* since it is the dimension most frequently damaged during those interactions. Trust-damaging behaviors via competence might have been easier to observe and more likely to occur early in the relationship development.

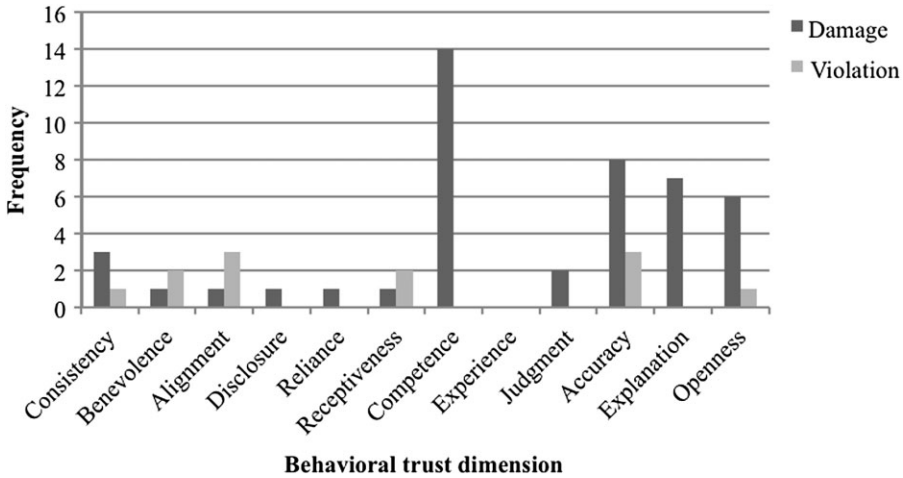
Validity Checks

Our research method raises validity concerns about the accuracy of coding behaviors. The coding schema was refined over several iterations and with the benefit of feedback from trust scholars. It also builds on other scholarly works that have developed behavioral trust schemas and validates the use of the dimensions identified based on testing on real interactions. The most reliable way to address coding validity concerns is via inter-rater reliabilities that compare the results and differences between our trained observers when coding each type of trust-based behavior (building, damaging, and violating; Landis & Koch, 1977). Inter-rater reliability (Cohen's kappa) for trust-building and trust-damaging behaviors were 0.84 and 0.87, respectively, supporting the usefulness of our coding schema and method. Both observers identified all 12 trust-violating behaviors (Cohen's kappa of 1.0), confirming the fundamental difference between displays of trust damage

3. Although fewer than half of the offers made and accepted in the "Den" were subsequently consummated, funds were advanced to entrepreneurs with and without trust-damaging behaviors.

Figure 3

Frequencies of Trust-Damaging and -Violating Behaviors per Behavioral Trust Dimension



and trust violation. We also measured the coding reliability for the introduced control, the degree of BA–entrepreneur similarities, and the entrepreneur’s presentation skill; interrater reliabilities were 0.94, 0.92, and 0.78, respectively (the lower rating for presentation skill likely results from its measurement on a 1–5 Likert scale, as opposed to control and similarities, which had binary measures).

Internal and external validity concerns also emerge due to the context of the interactions. In Table 3, we adopt a framework developed by Meyer (1995) to address these context-based concerns. A team of professionals—including one of the authors—with legal, accounting, marketing, and technical expertise was formed to ensure the realism of the interactions and to subsequently assist the entrepreneurs whether or not they received an investment offer. The TV-set interactions mirrored real-life interactions on two key dimensions: the BAs invested their own money, and they decided whether or not to enter long-term relationships with the entrepreneurs. Even the short timescale of the interaction may reflect real-life BA–entrepreneur interactions, in which BA investment decisions are often made within 10 minutes of the start of the first interaction, according to Mason and Rogers (1997). Post, van den Assem, Baltussen, and Thaler (2008) also identify a number of studies that use data from TV shows to investigate how individuals make decisions under uncertainty, although rarely was one of the authors involved in the show’s development and production, as is the case here. Such involvement can help reduce several other internal validity concerns, including changing the context of the interaction (e.g., removing a BA because he/she was too “nice”) by someone external to the interaction (e.g., the show’s producers).

Regarding external validity concerns, a crucial one in our context is that participants in subsequent seasons of the show could observe outcomes from previous seasons. This influenced who auditioned for the show and how participants in subsequent shows behaved in the “Den.” In turn, it also influenced whom the show producers selected. While we could not eliminate these concerns, we found no difference in success rates between participants in seasons 1 and 4 who reached our sample (i.e., the relationship-risk stage of the interaction in Figure 2).

Table 3

Validity Concerns on Data From a Reality-TV Show

	Concern	Symptom	Mitigation
Internal validity	Omitted variables	Other factors than hypothesized may affect outcomes	Entrepreneur-investor similarities and entrepreneur's presentation skill were not found to predict the investment decision
	Outcome trends	External (e.g., economic) factors may change outcomes over time	4-year data set were compared where investment rates increased, but rejection rates at the relationship-risk stage did not
	Mis-specified variances	Possible correlation of independent variables	Correlation tests were run prior to the regression, statistical tests separated the effect of trust-building, trust-damaging, and trust-violating behaviors
	Mis-measurement	Accuracy errors caused by data collection method	High degrees of inter-rater reliability
	Externalities	Context changes based on prior interactions	While changes in the interactions were noticed, one of the authors' participation limited the effects on displayed behaviors
	Simultaneity	Independent interactions variables jointly affect outcomes	Interaction effects between trust-building and trust-damaging behaviors were found to be insignificant
	Selection	Participant selection criteria linked to outcomes	Selection process was independent of interaction, and the effect on the decisions made in the "Den" were limited
	Attrition	Participant may decide not to continue with interaction	All entrepreneurs left the interaction with an offer, after refusing an offer, or when rejected by the BAs
	Omitted interactions	Sample chosen for investigation linked to outcomes	A fundamental part of the research method was based on a similar process in practice
External validity	Previous outcomes affect selection	Individuals may not apply due to low likelihood of success	An open audition encouraged all entrepreneurs across Canada to participate
	Context may deter participation	Concerns about treatment by BAs or exposure on public TV	Interaction setting was designed to replicate real-life interactions with Business Angel Groups
	Previous behaviors affect outcomes	Observed previous behaviors may affect future behaviors	Participants learn from previous interactions, but no change in the percentage receiving offers during the relationship-risk stage

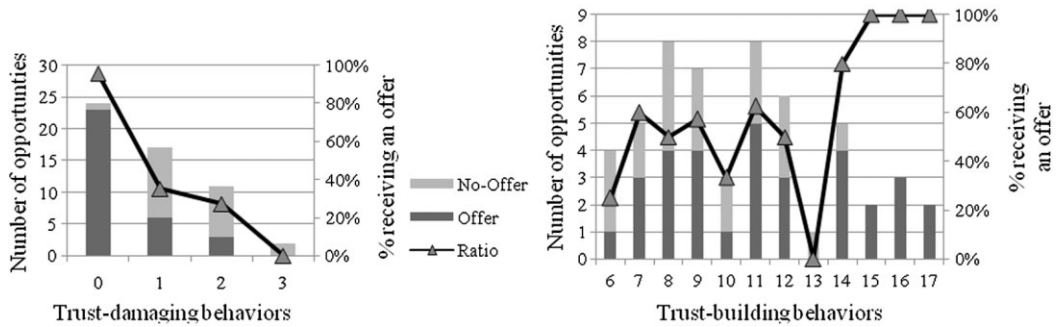
Testing the Hypotheses

We use statistical hypothesis tests to verify whether our data support hypotheses 1–4. We chose statistical testing because it provides insights on each incident of trust-based behavior and tells us whether or not the difference in mean values between subsets (those who receive an offer vs. those who do not) is statistically significant. For hypothesis 1, we apply a one-way *t*-test for the comparison of two averages (with unknown equal variances).⁴ Accepting the alternative hypothesis—the average number of trust-building behaviors is greater for the subset of entrepreneurs who receive an investment offer than for the subset who do not—provides statistical support for hypothesis 1. The average number of trust-building behaviors in the sample of 32 entrepreneurs who received an investment offer is 11.38, whereas in the sample of 22 entrepreneurs who did not receive

4. This test is appropriate given that the number of trust-building behaviors (per opportunity and for the 54 we analyze) appears to be approximately normally distributed.

Figure 4

Frequencies and Investment Offer Ratios



an offer is 9.41. The t -statistic is 2.39 (a t -Student statistics with 52 degrees of freedom), which provides statistical support for accepting hypothesis 1 (with a one-tail p -value <0.02). In other words, an entrepreneur who receives a BA investment offer is expected to display a greater number of trust-building behaviors than an entrepreneur who does not receive such an offer.

For hypothesis 2, given the much smaller number of trust-damaging behaviors recorded, we apply a Mann–Whitney test (which is a nonparametric version of the t -test). The alternative hypothesis states that the average number of trust-damaging behaviors will be smaller for the subset of entrepreneurs who receive an investment offer than for the subset who do not. The average number of trust-damaging behaviors in the received-investment-offer sample is 0.38, whereas it is 1.50 in the sample that did not. The Mann–Whitney U is 605.5 (where $n_1 = 32$ and $n_2 = 22$), which provides statistical support for accepting hypothesis 2 (with a p -value <0.0001). In other words, an entrepreneur who receives a BA investment offer is expected to display a smaller number of trust-damaging behaviors than an entrepreneur who does not receive an offer. Figure 4 illustrates a tendency for entrepreneurs to receive offers if they display a rather large number (e.g., 14 or more) of trust-building behaviors and a low number of trust-damaging behaviors (in this case, a monotone decreasing relationship).

While for hypotheses 1 and 2, we had to compare frequencies of trust-based behaviors, for hypotheses 3 and 4, we had to compare percentages of entrepreneurs receiving offers. The Fisher exact test is a more accurate statistical test than the usual Chi-squared test when comparing two percentages where one subset has a low count, which is the case for testing both hypotheses 3 and 4. The alternative hypothesis for hypothesis 3 states that the percentage of entrepreneurs who receive an offer will be smaller for the sample in which each entrepreneur displays trust-violating behaviors than for the sample in which they do not. As highlighted in Table 4, only one entrepreneur in the sample of 12 (8.3%) who displayed trust-violating behaviors received a BA investment offer, whereas 31 in the sample of 42 (73.8%) entrepreneurs who did not display trust-violating behaviors received an offer (as opposed to, respectively, 30.0% and 95.8% for trust-damaging behaviors). The Fisher exact test gave a $p = 0.0134$, which provides statistical support for accepting hypothesis 3 (as this is an exact test, there is no calculation of significance). In other words, the percentage of entrepreneurs who receive a BA investment offer while displaying trust-violating behaviors is expected to be smaller than the percentage of entrepreneurs who receive such an offer but whose behaviors do not violate trust.

Table 4

Investment Offer Ratios for Opportunities With Trust Damage/Violation

	Opportunities with			Opportunities with	
	Trust damage	No trust damage		Trust violations	No trust violation
Offer	9	23	Offer	1	31
No offer	21	1	No offer	11	11
Total	30	24	Total	12	42
% receiving an offer	30.0%	95.8%	% receiving an offer	8.3%	73.8%

For hypothesis 4, the alternative hypothesis is that for entrepreneurs whose behavior has damaged or violated trust, the percentage who receives an investment offer will be greater for the sample in which the BA presents each entrepreneur with a control than for the sample in which they do not. Among the 31 entrepreneurs who damaged or violated trust, the 10 who received an investment offer were all presented with a control by the BA, whereas none of the 21 who received no investment offer was presented with a control. The Fisher exact test gave a $p = 0.00046$, which provides statistical support for accepting hypothesis 4. In fact, in our sample, the BA's proposed control appears to have been a prerequisite to receiving an investment offer for all of the entrepreneurs who had damaged or violated trust.

Predictive Strength of Trust-Based Behaviors

While we found statistical support for each of our four hypotheses, we also wanted to rule out the possibilities that two independent variables, BA–entrepreneur similarities and the entrepreneur's presentation skill, could better predict the observed outcomes. We therefore conducted regression analysis to explore the predictive significance of trust-based behaviors on the likelihood of receiving an investment offer, and the effect of each of these alternative independent variables on this relationship. Table 5 shows the correlation matrix, and identifies two significant correlations: (1) between the introduction of a control and trust-building behaviors, and (2) between trust-damaging and trust-violating behaviors. Neither is surprising. We have already noted that the BA is more likely to introduce a control if he/she has already developed a relationship and somewhat trusts the entrepreneur, which would likely be linked to the entrepreneur's display of trust-building behaviors. In addition, trust violators are also more likely to damage trust.

We use logistic regression to examine three models of the relationship between the independent variables and the decision to make an investment offer (a dichotomous outcome). In Model 1, we include the three types of trust-based behaviors (i.e., number of behaviors that build, damage, and violate trust), dropping the independent variable control because of colinearity. In Model 2, we add BA–entrepreneur similarity, and in Model 3, we add the entrepreneur's presentation skill. Table 6 summarizes the regression results.

Model 1 shows statistical significance for each type of trust-based behavior, with all regression coefficients being significant (p -value < 0.05). This finding supports our earlier

Table 5

Correlation Matrix

	Trust building	Trust damaging	Trust violating	Control	BA–entrepreneur similarities	Entrepreneur’s presentation skill
Trust building	1					
Trust damaging	-0.137	1				
Trust violating	-0.042	0.356**	1			
Control	0.268*	0.199	-0.140	1		
BA–entrepreneur similarities	-0.081	0.045	0.094	-0.034	1	
Entrepreneur’s presentation skill	0.118	0.257	0.184	-0.037	-0.254	1

* significant at 0.05, ** significant at 0.01

Table 6

Regression Results (With Odds Ratio)

	Model 1	Model 2	Model 3
Constant	-2.850 (0.058)	-4.440 (0.012)	-7.135 (0.001)
Trust building	0.678** (1.970)	0.872* (2.392)	0.868* (2.381)
Trust damaging	-3.012** (0.049)	-3.765** (0.023)	-4.105** (0.016)
Trust violating	-6.328* (0.002)	-7.689* (0.000)	-8.450* (0.000)
Control	NA [†]	NA [†]	NA [†]
BA–entrepreneur similarities		2.026 (7.586)	2.330 (10.273)
Entrepreneur’s presentation skills			0.731 (2.078)
R ² (Cox and Snell)	0.580	0.599	0.605
Model accuracy	88.9%	87.0%	87.0%

* significant at 0.05, ** significant at 0.01

[†] Dropped due to colinearity.

assertion that each type of behavior is a different construct. Also as expected, the coefficient is positive for trust-building behaviors and negative for both trust-damaging and trust-violating behaviors. In other words, the more trust-building behaviors the entrepreneur displays, the higher the likelihood he/she will receive an investment offer, but the more trust-damaging or trust-violating behaviors the entrepreneur displays, the lower the likelihood he/she will receive an investment offer. From the odds ratios (OR), we also observe that each occurrence of a trust-building behavior is associated with almost double the chances of the entrepreneur receiving an offer (OR = 1.97) and each time an entrepreneur exhibits a trust-damaging behavior, his/her chance of receiving an offer decreases by about 20 times (1/OR = 1/0.049). Trust violation decreases the entrepreneur’s chance of receiving a BA investment offer by 500 times (1/0.002), virtually killing an entrepreneur’s chance of receiving an offer.

In Models 2 and 3, the coefficient of neither added variable is statistically significant, and adding these two variables reduced rather than increased the predictive accuracy (i.e., the percentage of opportunities where the model predicted the outcome—offer/no offer—correctly). Yet, all coefficients for the three types of trust-based behavior are significant (p -value <0.05) and retain relatively similar values and identical signs. Therefore, BA–entrepreneur similarities and the entrepreneur’s presentation skill cannot provide alternate explanations for the investment offer decision (we also verified that interaction effects were not significant).

Discussion and Conclusion

Most of the empirical research on how BAs make decisions has focused on the characteristics of the venture (e.g., large potential market) and entrepreneur attributes (e.g., relevant experience), but not on the BA’s decision-making process to evaluate whether or not they can develop a long-term relationship with the entrepreneur, a major factor in the BA’s decision to offer funding. In fact, the context of BA–entrepreneur interactions—over extended periods and in a confidential environment—has made it challenging to gather data, especially on the role of trust development in the BA–entrepreneur relationship. This paper addresses this shortcoming. Further, the research on rapid trust development in informal cooperative relationships often confuses the use of social and institutional controls with the development of direct interpersonal trust (e.g., Meyerson, Weick, & Kramer, 1996). Researchers have also ignored fundamental agency differences between venture capitalists (VCs) and BAs, based on the fact that VCs invest others’ money while BAs invest their own money, thereby overlooking the differences in trust development between investor types and entrepreneurs (van Osnabrugge, 2000). Our ability to access a unique (and contextually appropriate) data set, our utilization of an observational-interaction technique, and our development of a behavioral trust schema has enabled us to address each of these limitations.

We found that in a short time span and under public exposure (a TV audience), BAs pay particular attention to key signals that entrepreneurs provide in their displays of positive or negative trust-based behaviors, which are often exaggerated under pressure (Mishra, 1996). While it might seem incredible that so much information about individual ventures, entrepreneurs, and potential relationships can be gleaned in such short interactions (i.e., between 15 and 75 minutes), our findings reflect what scholars call rapid-judgment decision making (or *thin slicing*; Ambady, Bernieri, & Richeson, 2000). Maxwell et al. (2011) conjecture that experienced investors develop heuristics that enable them to rapidly eliminate opportunities early in the investment decision-making process, despite the fact that this practice may sacrifice accuracy for expediency (Gigerenzer & Goldstein, 1996). We argue that later in the process, BAs change their decision-making process and instead “intuitively audit” positive and negative displays of trust-based behaviors to determine the level of relationship risk before making an investment offer.

Overall, the statistically significant support that we found for our four hypotheses suggests that entrepreneurs displaying a comparatively large number of trust-building behaviors and a comparatively small number of trust-damaging ones are more likely to receive a BA investment offer. However, entrepreneurs who display trust-violating behaviors are unlikely to receive an offer. Once an entrepreneur violated trust, it almost always led to the termination of the relationship. Furthermore, as illustrated in Table 3, while damaged trust can sometimes be addressed through the BA’s introduction of a control, violated trust rarely can be remedied. In the 10 cases (out of 30) where trust was damaged

(as exemplified in Table 1) and a control offered, the damage was either due to a shortfall in the entrepreneur's anticipated capability or the entrepreneur's inappropriate reliance on another individual (over-trust). In these cases, the BA proposed his/her direct involvement in the venture or the introduction of behavioral controls on the entrepreneur (e.g., BA signature is required on all checks, arguably to reduce the chance of undesirable behaviors subsequently occurring). We note that the BA did not present a control or an investment offer when the damage was due to a lack of benevolence, alignment, or receptiveness. In one case (out of 12) where trust was violated and a control introduced, the violation was due to a misalignment of core values between the BA and the entrepreneur. That violation was addressed by the BA offering to invest in return for 100% ownership of the company. While this is technically a control mechanism, if accepted, the BA eliminates the relationship risk and is no longer vulnerable to the entrepreneur's actions. We also note that six of the entrepreneurs who received an offer turned it down: half disagreeing with the new venture valuation, the other half rejecting the proposed control option.

While potential alternate explanations for the interaction outcomes were examined—BA–entrepreneur similarities and entrepreneur's presentation skill—no support was found to suggest that either was a significant predictor of the investment offer decision, or moderated the effect of trust-based behavior displays. We did, however, observe that BA–entrepreneur similarities often made the interaction less adversarial, at least initially, while most of the entrepreneurs had high presentation skill levels. Our ability to eliminate the BA–entrepreneur similarities and the entrepreneur's presentation skill as alternate explanations reinforces our proposition that trustworthiness is a critical ingredient for entrepreneurs seeking BA investment.

On the theoretical side, our findings suggest that researchers pay closer attention to the connection between specific entrepreneurial behaviors and interaction outcomes. The characterization of behaviors that affect entrepreneurs' ability to develop trust in their relationships highlights the competitive advantage enjoyed by entrepreneurs who can develop such relational contracts with partners. Also, investors' reactions to entrepreneurs' display of different types of negative trust-based behaviors (as exemplified in Table 1), either by rejecting the opportunity or identifying an appropriate control mechanism, highlight the different dimensions of trust at play in the BA's decision-making process. Further, in line with the work of Shanteau (1992) on using domain-specific experts to understand decision-making processes, our research suggests that experts like BAs can be instrumental in improving our understanding of how complex investment decisions are made. Indeed, during the interactions we observed, the BAs were instrumental in focusing our attention on the most important behavioral trust dimensions and in providing specific reasons for rejection.

On the methodological side, the use of an innovative research method to explore entrepreneurial behaviors in realistic environments responds to Bygrave's (2007) suggestion that entrepreneurship scholars build a "new paradigm with imaginative research methods" (p. 25). Our use of observational interactions and the development of an appropriate behavioral coding schema not only enabled us to explore behaviors and the BA–entrepreneur relationship development process, but helped demonstrate that analyzing short, but dynamic examples of entrepreneurial behaviors, can explain how experienced investors (or other potential stakeholders) make rapid judgments about whether to enter a business relationship. Given the importance of first impressions, and the expected high correlation between initial and subsequent behaviors, the use of video-based techniques to explore other entrepreneurial phenomena and confirm insights from game-theoretic reasoning in dyadic relationships is likely to advance entrepreneurship research.

On the practical side, an awareness of the multidimensional nature of trust and how it influences behaviors can help improve the behavior of entrepreneurs (e.g., when interacting with BAs), and encourage them to display more trust-building behaviors. Trust-damaging or trust-violating behaviors manifested, for instance, through a lack of benevolence or misalignment of core values, are indicative of problems that can prevent the fund-seeking entrepreneur from receiving BA investment. Identifying the many dimensions of trust-based behaviors also enables BAs to better understand the reasons for negative outcomes (e.g., when the entrepreneur rejects a control) from their interactions with entrepreneurs. It also enables BAs to deploy control mechanisms that are acceptable to the entrepreneur, allowing more investments to occur (or allowing more leeway for mistaken or ill-conceived mistrust). In turn, more entrepreneurs may be encouraged to start new businesses and seek external investment for expansion. Likewise, by improving BAs' decision-making processes, more investors will feel confident in their assessment and will be more likely to provide funding.

While we are encouraged by the research potential associated with extracting data from unedited line tapes from a CBC reality show, we are aware that behaviors displayed on a TV show can be atypical of actual interactions. One could expect that the entrepreneurs taped for the reality show would be more likely to receive an investment offer than entrepreneurs in real life (not taped TV shows), because the act of being willing to share an idea on national TV, and be chided by a "Dragon," shows a willingness to be vulnerable (in addition, less-trusting entrepreneurs may not be willing to expose themselves to vulnerability). Nevertheless, our analysis on identifying entrepreneur's trust-based behaviors and their impact on receiving an offer of BA investment may have not been possible otherwise, because too few entrepreneurs would have received an offer (the context of the show—environment, advisory team support, public exposure—was designed to enhance the likelihood of receiving an offer). We are also conscious that the number of interactions (54) that progressed to the stage of potential relationship development was rather small. Yet, we had a set of occurrences (displays of behaviors) large enough to conduct a statistical test, and in the case of small samples, we used a test that could accommodate small sample sizes. Further, our behavioral trust schema was developed with this small sample of interactions, which constrained our ability to identify the relative importance of each behavioral trust dimension or the possibility for other dimensions. We did, however, utilize the findings of extensive literature to minimize potential deficiencies in developing our schema. We leave these limitations as issues deserving further scrutiny by researchers in the realm of entrepreneurs' trustworthiness in attracting investment and growing their new ventures.

REFERENCES

- Ambady, N., Bernieri, F.J., & Richeson, J.A. (2000). Toward a histology of social behavior: Judgmental accuracy from thin slices of the behavioral stream. In M.P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 32, pp. 201–257). San Diego, CA: Harcourt.
- Amit, R., Glosten, L., & Muller, E. (1990). Entrepreneurial ability, venture investments, and risk sharing. *Management Science*, 36(10), 1232–1245.
- Arthurs, J.D. & Busenitz, L.W. (2003). The boundaries and limitations of agency theory and stewardship theory in the venture capitalist/entrepreneur relationship. *Entrepreneurship Theory and Practice*, 27, 145–162.
- Bakeman, R. & Gottman, J.M. (1997). *Observing interaction: An introduction to sequential analysis*. Cambridge, UK: Cambridge University Press.

- Baron, R.A. & Markman, G.D. (2003). Beyond social capital: The role of entrepreneurs' social competence in their financial success. *Journal of Business Venturing*, 18, 41–60.
- Boon, S.D. & Holmes, J.G. (1991). The dynamics of interpersonal trust: Resolving uncertainty in the face of risk. In R.A. Hinde & J. Groebel (Eds.), *Cooperation and prosocial behaviour* (pp. 190–121). Cambridge, UK: Cambridge University Press.
- Boyle, R. & Bonacich, P. (1970). The development of trust and mistrust in mixed-motive games. *Sociometry*, 33(2), 123–139.
- Bruton, G., Fried, V.H., & Hisrich, R.D. (2000). CEO dismissal in venture capital backed firms: Further evidence from an agency perspective. *Entrepreneurship Theory and Practice*, 24, 69–78.
- Burt, R. & Knez, M. (1996). Trust and third party gossip. In R.M. Kramer & T.R. Tyler (Eds.), *Trust in organizations: Frontiers of theory and research* (pp. 68–89). Thousand Oaks, CA: Sage.
- Butler, J.K. (1991). Toward understanding and measuring conditions of trust: Evolution of a conditions of trust inventory. *Journal of Management*, 17(3), 643–663.
- Bygrave, W.D. (2007). The entrepreneurship paradigm revisited. In H. Neergaard & J. Parm Ullhøi (Eds.), *Handbook of qualitative research methods in entrepreneurship* (pp. 17–48). Cheltenham, UK: Edward Elgar Publishing.
- Cardon, M.S., Zietsma, C., Saparito, P., Matherne, B.P., & Davis, C. (2005). A tale of passion: New insights into entrepreneurship from a parenthood metaphor. *Journal of Business Venturing*, 20, 23–45.
- Clark, C. (2008). The impact of entrepreneurs' oral "pitch" presentation skills on business angels' initial screening investment decisions. *Venture Capital*, 10(3), 257–279.
- Clark, M.C. & Payne, R.L. (1997). The nature and structure of workers' trust in management. *Journal of Organizational Behavior*, 18(3), 205–224.
- Colquitt, J.A., Scott, B.A., & LePine, J.A. (2007). Trust, trustworthiness, and trust propensity: A meta-analytic test of their unique relationship with risk taking and job performance. *Journal of Applied Psychology*, 92(4), 909–927.
- Currall, S.C. & Judge, T.A. (1995). Measuring trust between organizational boundary role persons. *Organizational Behavior and Human Decision Processes*, 64(2), 151–170.
- Das, T.K. & Teng, B. (1998). Between trust and control: Developing confidence in partner cooperation in alliances. *Academy of Management Review*, 23, 491–512.
- Deutsch, M. (1973). *Trust and suspicion: Theoretical notes. The resolution of conflict, constructive and destructive processes*. New Haven, CT: Yale University Press.
- Dyer, J.H. & Chu, W. (2003). The role of trustworthiness in reducing transaction costs and improving performance: Empirical evidence from the United States, Japan, and Korea. *Organization Science*, 14(1), 57–68.
- Eisenhardt, K.M. (1985). Control: Organizational and economic approaches. *Management Science*, 31, 134–149.
- Fiet, J.O. (1995). Risk avoidance strategies in venture capital markets. *Journal of Management Studies*, 32, 551–574.
- Franke, N., Gruber, M., Harhoff, D., & Henkel, J. (2006). What you are is what you like: Similarity biases in venture capitalists' evaluations of start-up teams. *Journal of Business Venturing*, 21, 802–826.

- Gabarro, J.J. (1978). The development of trust, influence, and expectations. In A.G. Athos & J.J. Gabarro (Eds.), *Interpersonal behavior: Communication and understanding in relationships* (pp. 293–303). Inglewood Cliffs, NJ: Prentice-Hall.
- Gartner, W.B. (1988). Who is the entrepreneur? Is the wrong question. *American Journal of Small Business*, 12, 11–32.
- Gigerenzer, G. & Goldstein, D.G. (1996). Reasoning the fast and frugal way: Models of bounded rationality. *Psychological Review*, 103(4), 650–669.
- Gillespie, N. (2003). *Measuring trust in working relationships: The Behavioral Trust Inventory*. Paper presented at the Academy of Management Conference, Seattle, WA.
- Goel, S. & Karri, R. (2006). Entrepreneurs, effectual logic, and over-trust. *Entrepreneurship Theory and Practice*, 30(4), 477–493.
- Grégoire, D.A., de Koning, A.J., & Oviatt, B.M. (2008). Do VCs evaluate “live” presentations like they evaluate business plans? *Frontiers of Entrepreneurship Research*, 28(3), 1–13.
- Harrison, R.T., Dibben, M.R., & Mason, C.M. (1997). The role of trust in the informal investor’s investment decision: An exploratory analysis. *Entrepreneurship Theory and Practice*, 21(4), 63–81.
- Kaplan, S.N. & Strömberg, P. (2004). Characteristics, contracts, and actions: Evidence from venture capitalist analyses. *The Journal of Finance*, 59(5), 2177–2210.
- Kelly, P. & Hay, M. (2003). Business angel contracts: The influence of context. *Venture Capital*, 5(4), 287–312.
- Kim, P.H., Dirks, K.T., & Cooper, C.D. (2009). The repair of trust: A dynamic bilateral perspective and multilevel conceptualization. *Academy of Management Review*, 34(3), 401–422.
- Korsgaard, M.A., Brodt, S.E., & Whitener, E.M. (2002). Trust in the face of conflict: The role of managerial trustworthy behavior and organizational context. *Journal of Applied Psychology*, 87, 312–319.
- Kramer, R.M. (1996). Divergent realities and convergent disappointments in the hierarchic relation: Trust and the intuitive auditor at work. In R.M. Kramer & T.R. Tyler (Eds.), *Trust in organizations: Frontiers of theory and research* (pp. 216–245). Thousand Oaks, CA: Sage.
- Kramer, R.M. (1999). Trust and distrust in organizations: Emerging perspectives, enduring questions. *Annual Review of Psychology*, 50, 569–598.
- Landis, J.R. & Koch, G.G. (1977). The measurement of observer agreement for categorical data. *Biometrics*, 33, 159–174.
- Levie, J. & Gimmon, E. (2008). Mixed signals: Why investors may misjudge first time high technology venture founders. *Venture Capital*, 10(3), 233–256.
- Lewicki, R.J. & Bunker, B.B. (1996). Developing and maintaining trust in work relationships. In R.M. Kramer & T.R. Tyler (Eds.), *Trust in organizations: Frontiers of theory and research* (pp. 114–139). Thousand Oaks, CA: Sage.
- Lewicki, R.J., Tomlinson, E.C., & Gillespie, N. (2006). Models of interpersonal trust development: Theoretical approaches, empirical evidence, and future directions. *Journal of Management*, 32(6), 991–1022.
- Marsh, S. & Dibben, M.R. (2005). Trust, untrust, distrust and mistrust: An exploration of the dark(er) side. *Trust Management, Lecture Notes in Computer Science*, 3477, 17–33.

- Mason, C.M. & Harrison, R.A. (2003). Auditioning for money: What do technology investors look for at the initial screening stage? *Journal of Private Equity*, 6(2), 29–42.
- Mason, C.M. & Rogers, A. (1997). Business angel's investment decision: An exploratory analysis. In D. Deakins, P. Jennings, & C. Mason (Eds.), *Entrepreneurship in the 1990s* (pp. 29–46). London: Chapman.
- Maxwell, A.L., Jeffrey, S.A., & Lévesque, M. (2011). Business angel decision making. *Journal of Business Venturing*, 26(2), 212–225.
- Mayer, R.C., Davis, J.H., & Schoorman, F.D. (1995). An integration model of organizational trust. *Academy of Management Review*, 20(3), 709–734.
- McAllister, D.J. (1995). Affect and cognition-based trust as foundations for interpersonal cooperation in organizations. *Academy of Management Journal*, 38(1), 24–59.
- McKnight, D.H., Cummings, L.L., & Chervany, N.L. (1998). Initial trust formation in new organizational relationships. *Academy of Management Review*, 23(3), 473–490.
- Meyer, B.D. (1995). Natural and quasi-experiments in economics. *Journal of Business and Economic Statistics*, 13(2), 151–161.
- Meyerson, D., Weick, K.E., & Kramer, R.M. (1996). Swift trust and temporary groups. In R.M. Kramer & T.R. Tyler (Eds.), *Trust in organizations: Frontiers of theory and research* (pp. 166–195). Thousand Oaks, CA: Sage.
- Mishra, A.K. (1996). Organizational responses to crisis: The centrality of trust. In R.M. Kramer & T.R. Tyler (Eds.), *Trust in organizations: Frontiers of theory and research* (pp. 261–287). Thousand Oaks, CA: Sage.
- Ouellette, J.A. & Wood, W. (1998). Habit and intention in everyday life: The multiple processes by which past behavior predicts future behavior. *Psychological Bulletin*, 124(1), 54–74.
- Paul, S., Whittam, G., & Wyper, J. (2007). Towards a model of the business angel investment process. *Venture Capital*, 9(2), 107–125.
- Petty, J.S. & Gruber, M. (2011). In pursuit of the real deal. *Journal of Business Venturing*, 26(2), 172–188.
- Post, M.J., van den Assem, G.B., Baltussen, G., & Thaler, R.H. (2008). Deal or no deal? Decision making under risk in a large-payoff game show. *American Economic Review*, 98(1), 38–71.
- Rabin, M. (2000). Risk aversion and expected utility theory: A calibration theorem. *Econometrica*, 68(5), 1281–1292.
- Rempel, J.K., Holmes, J.G., & Zanna, M. (1985). Trust in close relationships. *Journal of Personality and Social Psychology*, 49, 95–112.
- Riding, A., Duxbury, L., & Haines, J.G. (1997). Financing enterprise development: Decision-making by Canadian angels. *Conference Proceedings for Entrepreneurship Division of the Association of Management and International Association of Management*, 17–22.
- Rosen, B. & Jerdee, T.H. (1977). Influence of subordinate characteristics on trust and use of participative decision strategy in management stimulation. *Journal of Applied Psychology*, 62(5), 628–631.
- Rotter, J.B. (1980). Interpersonal trust, trustworthiness, and gullibility. *American Psychologist*, 35(1), 1–7.

- Sapienza, H.J. & Korsgaard, M.A. (1996). Procedural justice in entrepreneur-investor relations. *Academy of Management Journal*, 39, 544–574.
- Serva, M.A., Fuller, M.A., & Mayer, R.C. (2005). The reciprocal nature of trust: A longitudinal study of interacting teams. *Journal of Organizational Behavior*, 26, 625–648.
- Shanteau, J. (1992). Competence in experts: The role of task characteristics. *Organization Behavior and Human Decision Processes*, 53, 252–266.
- Shapiro, D., Sheppard, B.H., & Cheraskin, L. (1992). Business on a handshake. *Negotiation Journal*, 8, 365–377.
- Shepherd, D.A. & Zacharakis, A. (2001). The venture capitalist-entrepreneur relationship: Control, trust and confidence in co-operative behavior. *Venture Capital*, 3(2), 129–150.
- Simons, T. (2002). Behavioral integrity: The perceived alignment between managers' words and deeds. *Organization Science*, 13(1), 18–35.
- Strickland, L.H. (1958). Surveillance and trust. *Journal of Personality*, 26, 200–215.
- van Osnabrugge, M. (2000). A comparison of business angel and venture capitalist investment procedures: An agency theory-based analysis. *Venture Capital*, 2(2), 91–109.
- Tomlinson, E.C. & Mayer, R.C. (2009). The role of causal attribution dimensions in trust repair. *Academy of Management Review*, 34, 85–104.
- Whitener, E.M., Brodt, S.M., Korsgaard, M.A., & Werner, J.M. (1998). Managers as initiators of trust: An exchange relationship framework for understanding managerial trustworthy behavior. *Academy of Management Review*, 23(3), 513–530.
- Wiltbank, R., Read, S., Dew, N., & Sarasvathy, S.D. (2009). Prediction and control under uncertainty: Outcomes in angel investing. *Journal of Business Venturing*, 24, 116–133.
- Yazdipour, R. (2010). A behavioral finance approach to decision making in entrepreneurial finance. In R. Yazdipour (Ed.), *Advances in entrepreneurial finance: With applications from behavioral finance and economics* (pp. 11–30). New York: Springer.
- Zacharakis, A. & Meyer, G.D. (1998). A lack of insight: Do venture capitalists really understand their own decision processes? *Journal of Business Venturing*, 13, 57–76.

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